

## Paper TU08

# PDF Can be Pretty Darn Fancy: Tips and Tricks for the ODS PDF Destination

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### Abstract

We're not too far removed from the days when presentation-ready SAS® output meant lots of cutting and pasting or retyping. Now, the ODS PDF destination enables you to produce high quality output the first time, without other tools or applications.

This paper explores a number of ODS options in general and, more specifically, their use in creating PDF output. We will cover ODS ESCAPECHAR, which allows for inline formatting of titles, footnotes and other text; ODS LAYOUT, which lets you place output wherever you want it on the page - even output from more than one procedure; inline formatting in PROC REPORT; overlaying output from SAS/Graph procedures on top of other output and more.

We'll work from real life examples and see how you can produce output that looks like it took hours to create.

### Introduction

This paper could be called “A Tale of Five Reports” – a series of real world examples that demonstrate a number of techniques that can be used with the PDF destination to make your reports crisper, cleaner and more useful than ever before.

All too often it seems that the examples presented in conference papers are difficult to translate to “real” code and the reader is forced to bridge the gap between concept and reality. All the examples shown here are copied directly from production code – the only exception being some macro variable references have been “resolved” to show the real values. The hope is that these annotated examples will give some ideas to use in your own jobs and see the breadth of options available to make your output look the way you want it to – without any after-the-fact intervention.

### PROC REPORT, ODS PDF and Inline Styles

Many of the examples presented in the paper use PROC REPORT. This procedure has the most flexibility in its use of ODS-related options and can best demonstrate the possibilities of creating PDF output. However, there are similar techniques that can be used with PROC PRINT and PROC TABULATE, as well as a number of techniques we'll see that are procedure independent.

### CREATING GROUPS OF DATA COLUMNS

We'll start with something simple – simple that is with ODS and PDF, not so simple just a few short years ago. Notice in Exhibit 1/Item 2 that there is a little extra space between some of the columns. Not quite a full data column worth, but enough to offset groups of data columns.

This is easy to do in PROC REPORT with some in-line formatting and a computed column. The pertinent code is shown below:

```

column popday Bookings Releases locationgroup,(blank thisyear lastyear diff);
:
define locationgroup / across '' format=securelocation. order=data preloadfmt
style=[font_size=9pt font_weight=bold];
define thisyear / analysis sum "&ReportYear" format=comma7.;
define lastyear / analysis sum "%eval(&ReportYear-1)" format=comma7.;
define diff / analysis sum 'Percent^Change' format=MyPct.;
define blank / computed '' format=NoDot. style=[cellwidth=8mm];

compute blank;
blank = .;
endcomp;

```

Add another column (*blank*) to those under the location header

The *CELLWIDTH=STYLE* option specifies the width of the data column – in this case 8mm

The *COMPUTE* block creates the variable *blank* as a missing numeric value on every row of the report

Note in the report that the columns with yearly data (*thisyear*, *lastyear* and *diff*) are placed under a common column header (the “across” variable *locationgroup*). To visually separate the columns we can include a fourth variable, *blank*. *Blank* does not exist in the incoming dataset – it is computed in the procedure and set to missing (note the *COMPUTE* block). This could be done prior to ODS and you’d get a blank column in your output. However, notice the *STYLE=* parameter on the *DEFINE* statement for *blank*: we can specify the width of the column with the *CELLWIDTH* parameter and create a gap as large or small as we need.

We’ll see a number of other examples of style parameters. The syntax is simple:

```
STYLE=[<style option=style value> <style option=style value >]
```

You can enclose as many option=value pairs as you need, separated by spaces. A complete list of style options is included in Appendix A at the end of the paper.

### CREATING GROUPS OF DATA ROWS

We’ve seen how to add and control the appearance of blank columns in a report. We can use another technique to add blank rows to a report. Again, this technique could be used prior to ODS, but with the addition of *STYLE* we can control the appearance of those blank rows. Take a look at Exhibit 2/Item 2. Note that the blank line every five rows is a different color than the data rows and that it’s not as tall as the data rows. The blank lines are created in the following *COMPUTE* block.

```

compute before LineGroup / style=[font_size=3pt background=cxBDB76B];
line ' ';
endcomp;

```

The *FONT\_SIZE=STYLE* changes the size of the text that will be generated in the *COMPUTE* block

The *BACKGROUND=STYLE* changes the background color of the text that will be generated in the *COMPUTE* block

The variable *LineGroup* is a non-printing *GROUP* variable that changes values every five observations. So, this *COMPUTE* code executes at the beginning of each group of five observations and writes a blank row to the table. However, it’s size and color are different from the surrounding rows because of the *STYLE=* option.

### DIFFERENTIAL STYLES ON DATA ROWS

Another use of inline styles can be seen in Exhibit 3. Item 1 points out that we have different text styles on different rows of the table, depending on the type of data displayed. The total lines are italicized for added emphasis.

The TreatmentDetail variable has a value "XX" for total adult and total youth values. The variable YouthAdult has a value "Z" for the grand total values.

*The FONT\_STYLE= STYLE changes the appearance of the text for the entire row - note that the scope of the CALL DEFINE is the row (\_row\_)*

```
compute treatmentdetail;
  if YouthAdult eq 'Z' or TreatmentDetail eq 'XX' then
    call define(_row_, 'style', "style=[font_style=italic]");
  if YouthAdult eq 'Z' then call define(_col_, 'style', "style=[background=white]");
endcomp;
```

Note that both of the CALL DEFINES are called for YouthAdult='Z' - you can see in the output that both the subtotal rows and the grand total row are italicized. The subtotal rows do not trigger the second CALL DEFINE and are left with their default background colors.

*The row header column normally has a colored background. On the grand total row, we use the BACKGROUND STYLE= option to set the column (\_col\_) background color to white.*

There is one other trick to note from Exhibit 3. We just alluded to the fact that the header row has a background color. It's hard to see in the black and white copy in the paper, but the background color of the header rows are the same color as the bars in the corresponding graph on the bottom of the page. The Adult rows in the table and bars on the Adult graph are green. The background and bars for the youth are blue. We can use another style trick to make this easy.

We start out by defining a SAS format that has RGB color codes as the labels for the data values.

```
value $TxColorDetail
  'OPA', 'IOA', 'MOA', 'GCA', 'XXA' = 'cx52b552'
  'OPY', 'IOY', 'MOY', 'GCY', 'XXY' = 'cx6373b5'
  'OSX' = 'cxd63194'
  'ZZZ' = 'white';
```

*All the adult values (ending in "A") are assigned to an RGB value (cx52b552) that is green. The youth values (ending in "Y") are assigned to a value that is blue (cx6373b5).*

The format will be used in an unusual place. As we saw above, the dataset used in the report contains a variable called TreatmentDetail that contains the type of treatment received (i.e., OPA=outpatient adult). We're going to reference the format we've just created, which defined the colors we want to use based on the type of treatment received, in the DEFINE statement for TreatmentDetail.

```
column YouthAdult TreatmentDetail (AdmissionDate,Total);

define YouthAdult / group noprint format=$YouthAdult;
define TreatmentDetail / ' ' group preloadfmt order=data
  format=$TreatmentTypeDetail.
  style=[background=$TxColorDetail. foreground=white font_weight=bold];
:
```

*Note that the BACKGROUND STYLE= option is calling the format with the colors. The value of TreatmentDetail is going to determine the background color of the cell!*

So, using the format in a STYLE= option on the DEFINE statement allows us to control the appearance of the data cell based on the value of the data.

We'll have one more example of inline STYLE= options when we discuss methods for putting output from more than one procedure on a page. For now, let's look at the greatest thing to happen to ODS since.... Well, it's just the greatest thing ever to happen to ODS.

## ODS ESCAPECHAR – THE GREATEST THING SINCE SLICED BREAD

The ODS ESCAPECHAR statement, while not specific to PDF, is one of most powerful new features of the Output Delivery System. The statement defines a character that is used to designate the beginning of a series of formatting commands.

```
ODS ESCAPECHAR='^';
```



## Special Escape Sequences

In addition to S={}, the ESCAPECHAR can also be used to add some special values to your output.

In Exhibit 1/Item 3 we see a superscript on the footnote at the bottom of the page. Superscripting is achieved with the escape sequence {super nn}, where nn is the value to be superscripted. The code used in Item 3 shows that we can just add the escape sequence to the footnote text.

```
footnote1 '^{super 1}Totals may include contract beds';
```

The 1 is superscripted at the beginning of the text and, again, the escape sequence does not print. As you can guess, there is also a {sub nn} sequence to subscript values.

Exhibit 1 also shows another use of superscripts. Item 1 shows a superscript in a column header. The superscript value is actually contained in the label of the format for these values.

```
value securelocation (notsorted)
  1.3 = 'Main Jail - Wall St'
  1.6 = 'Main Jail - Oakes St'
  2 = 'The Ridge'
  3 = 'Camp Evergreen'
  4 = 'Contract Beds'
  9 = 'Subtotal^Secure Beds~{super 1}'
  9.1 = 'Subtotal^Community Corrections'
  9.2 = 'Total~{super 1}';
```

*The superscript designations {super 1} can be added to the format labels and will be applied whenever the formatted values are displayed*

As we've already seen, anywhere text can be generated the escape sequences can be used.

A topic which has generated a number of SUGI papers is putting dynamic page numbers on your output. This is a paper topic no more as it now only an escape sequence added to your titles or footnotes. There are two escape sequences that we'll demonstrate for included page numbers on your output.

A number of the exhibits included in this paper have page numbers – we'll look at those shown on Exhibit 4/Item 3.

```
footnote h=8pt f=Arial j=1 "%sysfunc(today(),mmdyy10.)"
      j=r "^{thispage} / ^{lastpage}";
```

*This footnote contains two pieces, the left justified date and the right justified page numbers.*

*The {thispage} sequence resolves to the current page number. The {lastpage} sequence resolves to the page number of the last page, i.e., the number of pages.*

We can use the {thispage} and {lastpage} sequences together to get the nice "page x of y" that we've struggled so many years for.

One last special escape sequence to note is wrapping to a marker. Exhibit 5/Item 2 shows a nice set of footnotes indented under a header. All of the footnotes in this example are done with a single footnote statement.

We will use two escape sequences here to get the footnotes looking this way. First, the -2n sequence produces a line break in the text. (A quick side note here – does the fact that there are a whole bunch of nicely arranged footnote lines generated from a single footnote statement give you a clue that you'll never have to worry about the 10 footnote limit again!). But, we can use -2n in conjunction with another escape sequence (m) to get the indented effect that we see.

The m escape sequence sets a "marker" that the -2n will wrap to. This is more easily explained with the code that generated the example.

First, notice that this is all one footnote statement. Second, if you look between the code and the exhibit you will see that the individual physical line in the code do not affect the output – they are there only to make them fit on my screen when I'm writing the code. Now, let's look at the use of the two escape sequences.

```
footnote1 j=1 h=8pt f='Arial'
'Defimnitions:'
'^-2nPAO Referral: Referral from police - Source: PAO'
'^-2nCase Credit: Source: OPD'
'^-2nFiling: Referral filed in Superior Court - Source: Superior Court - SCOMIS'
'^-2nResolution: Cases adjudicated in Superior Court by any method (plea, verdict, dismissal or other) '
'- Source: Superior Court - SCOMIS'
'^-2nGuilty Plea: any case that is resolved with a plea irrespective of when in the process the plea '
'occurs (even during trial).'
'^-2nTrial: any case that is resolved with a trial verdict.'
'^-2nDismissal: any case that is dismissed at any time in the process (including those dismissals that '
'occur during trial).'
'^-2nOther: any case resolution that is not resolved via plea or trial - example is a "change in venue".'
'^-2n^'-2nMedian Days: Median days from filing to resolution. The median is the number of days where half '
'the cases were longer and half the cases were shorter.';
```

*Notice the ^m in the middle of the word "Definitions." This is an escape sequence, that will not print, which marks the place that any subsequent line breaks (-2n) should wrap to.*

*The -2n characters denote where a line break should take place. Since we've set a marker (m) in the text, all the line breaks will wrap to that mark – right under the "n" in "Definition" in this case. If there was no marker character the -2n would still cause a line break, with the text wrapping to the beginning of the next line.*

**ODS PDF TEXT**

There is new way you can embed text in a document. The ODS PDF TEXT command is like a PUT statement that you can use anywhere. The syntax is simple,

```
ods pdf text='<text goes here>';
```

The output of the command will be placed on the page immediately following the last procedure output. It would be a relatively useless command if all it did was place plain text. I bet you've already figured out that all the inline style functionality provided by ESCAPECHAR can be used in PDF TEXT.

Exhibit 6 shows an entire page generated using nothing but PDF TEXT. This offers a wonderful method of adding explanatory text to your reports without having to edit them after the fact.

*We start out by turning on bold, 14-point font for the header of the line of text and then, turn off the bold for the rest of the text.*

```
ods pdf text="^S={font_weight=bold font_size=14pt}A. ^mOperation Definition:^S={font_size=14pt}
The proportion of people in the general population who received publicly funded Outpatient
mental health services in the Fiscal Year by RSN.";
```

*Note that we've placed a marker (m) here, but there are no line breaks (-2n) specified in the text. The text will wrap to the mark even if the line break is caused by an automatic line break due to the length of the text.*

**OUTPUT FROM MORE THAN ONE PROCEDURE ON A PAGE**

With SAS/Graph we've had PROC GREPLAY and the VPOS/HPOS/VSIZE/HSIZE options that have allowed putting output from more than one graphic procedure on the page at one time. This has always been more of a challenge with output from text-based reporting procedures. We'll look at two methods now available with ODS which allows us to do just that.

## **STARTPAGE=NEVER**

By default, any time a new procedure is run a new page will be created in the output document. There is an option (STARTPAGE=) on the ODS PDF statement which controls that page generation.

The STARTPAGE=NEVER option tells ODS that you don't want a page generated between procedures. You still get a new page when the current page fills up, but new procedure output will start immediately following previous output.

Exhibit 5 shows an example of how this works. The data at the top of the page is generated from a PROC REPORT. The data at the bottom of the page is from a second PROC REPORT. The ODS PDF statement contained a STARTPAGE=NEVER so that the output from both procedures showed up on the same page.

There is a STARTPAGE=NOW option you can use to force a new page whenever you want it, which is handy if you've turned the startpage off. You can set the startpage to NOW with a ODS PDF statement that does not reference a file, so will be applied to the current PDF file being created. For example,

```
ods pdf file='my pdf file.pdf' startpage=never;
```

```
<procedure 1>
```

```
<procedure 2>
```

```
ods pdf startpage=now;
```

```
<procedure 3>
```

There would be no page break between the output from procedures 1 and 2 above, but output from procedure 3 would begin on a new page.

It was noted earlier that there would be one more STYLE= example when we discussed multiple outputs on a page. In Exhibit 5, the single columns in the upper report need to be centered over the groups of three columns in the lower report. We can do this with STYLE= options on the DEFINE statements in the two procedures.

*The important thing to note here is the CELLWIDTH values: in the first PROC REPORT, the header column is set to 45 and the "data" columns (Value and Blank) have values of 29 and 17 (46 total).*

```
columns Type DateIndex,(Value Blank);
define Type / group ' left style=[cellwidth=45mm font_weight=bold];
define DateIndex / ' across order=internal format=$ReportDateLabels. center;
define Value / ' sum format=CommaUnknown. style=[just=dec cellwidth=29mm] center;
define Blank / ' sum format=Blank. style=[cellwidth=17mm];
```

```
columns ResolutionGroup ResolutionCode DateIndex,(Value Pct MedianDays Blank);
define ResolutionGroup / group noprint;
define ResolutionCode / 'Breakdown of^-2nResolution Dispositions' group style=[cellwidth=45mm];
define DateIndex / ' across order=internal format=$ReportDateLabelsBlank. center;
define Value / "N" sum format=CommaUnknown. right style=[cellwidth=12mm];
define Pct / "%" sum format=PercentUnknown. right style=[cellwidth=13mm];
define MedianDays / "Median^-2nDays" sum style=[cellwidth=13mm];
define Blank / ' sum format=Blank. style=[cellwidth=8mm];
```

*We want the columns in the second PROC REPORT to line up with those in the first one. The header column width here is the same (45) and the sum of the "data" columns (Value, Pct, MedianDays and Blank) is the same as above (12+13+13+8=46).*

Notice also that we've made one more use of -2n. In the variable labels for ResolutionCode and MedianDays, we've added a -2n to split the label. Note: in order to fit this all on the page some code has been removed that is part of those labels. This additional information makes the use of the PROC REPORT SPLIT= option unusable in this case.

## **ODS LAYOUT**

Another method of putting more than one piece of output on the page is with ODS LAYOUT. LAYOUT enables you to specify regions on the page that output will be written to. Exhibit 7 shows a report with output from one PROC SQL, three PROC REPORTS and six PROC GCHARTS. How did we do this one?

The first table is generated with PROC SQL with nothing special added, except that STARTPAGE=NEVER is set so that all the other output shows up on the same page. Then we start with LAYOUT. There are three commands necessary to use ODS LAYOUT.

```
ODS LAYOUT START;
```

```
ODS REGION X=xxx Y=yyy WIDTH=www HEIGHT=hhh;
```

```
ODS LAYOUT END;
```

START and END turn on and off the LAYOUT and REGION specifies the size and position of the page region to write output to. There can be as many regions as you want on the page. There are some important region rules to be aware of:

- regions are not transparent. If they overlap, the first one defined has that space on the page and will overwrite the output beneath it.
- the size of the region is determined by the WIDTH and HEIGHT parameters, not the amount of data sent to the region. If you have a large region set and only one row of data, the region is still large (and may overlay other regions).
- output is not sized to the region. If it doesn't fit, it is truncated. There is a log note warning you of this.
- LAYOUT is limited to one page. There is no spanning of regions or output to additional pages.

With those rules in mind, let's look at the code for Exhibit 7.

```
ods layout start;
```

```
ods region width=2.5in height=3in y=.1in x=0in;
```

```
{PROC REPORT code}
```

```
ods region width=2.5in height=3in y=.1in x=2.65in;
```

```
{PROC REPORT code}
```

```
ods region width=2.5in height=3in y=.1in x=5.5in;
```

```
{PROC REPORT code}
```

```
ods layout end;
```

*We can have as many regions as we need. In this case, all the regions have the same size (2.5 by 3 in). The X and Y parameters position the output on the page. Notice that all the regions also have the same Y value, so they will be aligned across the top.*

*Note: the Y value is the distance from the top of the "printable area" to create the region. Since the PROC SQL output has already been sent to the page, the printable area starts below that.*

Notice that our regions do not overlap, the X value on each region is greater than the width of the previous region. Also, as noted above, the Y value is set from the top of the page (0=top of printable area). This is opposite of the Y position values in SAS/Graph, where 0 is the bottom of the page.

ODS LAYOUT is still in it's infancy. There are a number of other options that are experimental and may change. There are examples and news on the SAS web site of other features that are coming that you may want to play with.

## OVERLAYING GRAPHIC OUTPUT ON TABULAR DATA

There are occasions where it's nice to augment tabular output with some graphical elements. With some techniques we've already looked at we can do this. Exhibit 8 shows a PROC REPORT output that has vertical lines setting off groups of columns. This isn't possible to do with PROC REPORT and ODS alone.

The technique used here is to generate the REPORT output and then use an annotate dataset and PROC GSLIDE to create the lines. We can use the STARTPAGE=NEVER option to put the table and "graphic" on the same page.

```
ods pdf file='<file name here.pdf>' startpage=never;
<proc report code here>
```

*The STARTPAGE=NEVER allows for the REPORT output and the GSLIDE output to be on the same page.*

```
data anno;
  length color function $8;

  xsys='5'; ysys='5'; hsys = '4';

  %line(77,6,77,84,black,1,6);
  %line(53,6,53,84,black,1,6);
  %line(29.5,6,29.5,84,black,1,6);
run;
```

*The position of the lines was determined by trial and error. Running the job, tweaking the X and Y parameters, and running the job again until the lines were in the correct position.*

```
proc gslide anno=anno;
run;
quit;
```

*The PROC REPORT code uses the "blank" column trick discussed earlier to give a little extra space where the lines will be displayed.*

## CONCLUSION

This paper has presented a number of tips and tricks that you can use to enhance to look of your SAS output. There are a number of other options available for ODS in general and PDF output in particular. I'd encourage you to go to the SAS website where there is a wealth of information. Go to [support.sas.com](http://support.sas.com) and click on Communities and Base SAS. There you'll find FAQs, white papers, news and other information on ODS.

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1 – Superscript in column headers

Exhibit 1

2 – Gaps between data columns

**Snohomish County Department of Corrections**  
**Daily Secure Population**  
**September 2005**

September	Bookings	Releases	Main Jail - Wall St			Main Jail - Oakes St			The Ridge			Subtotal Secure Beds <sup>1</sup>			Subtotal Community Corrections			Total <sup>1</sup>		
			2005	2004	Percent Change	2005	2004	Percent Change	2005	2004	Percent Change	2005	2004	Percent Change	2005	2004	Percent Change	2005	2004	Percent Change
1	82	89	448	632	-16.7%	590		156	1,038	888	60.9%	75	54	38.8%	1,113	742	50.0%			
2	73	67	458	542	-16.4%	600		147	1,058	889	63.5%	74	58	27.5%	1,132	747	51.5%			
3	65	47	430	544	-20.9%	626		152	1,058	896	51.7%	76	58	31.0%	1,132	754	50.1%			
4	38	57	475	538	-11.7%	591		150	1,066	888	54.9%	78	60	30.0%	1,144	748	52.9%			
5	51	44	469	554	-15.3%	585		150	1,054	704	49.7%	78	58	34.4%	1,132	762	48.5%			
6	75	87	477	569	-16.1%	593		144	1,070	713	50.0%	73	55	32.7%	1,143	768	48.8%			
7	83	91	454	563	-23.4%	601		139	1,055	732	44.1%	76	53	43.3%	1,131	785	44.0%			
8	73	81	468	559	-16.2%	578		141	1,046	700	48.4%	77	50	54.0%	1,123	750	48.7%			
9	68	72	447	562	-20.4%	591		135	1,038	897	48.9%	77	51	50.9%	1,115	748	48.0%			
10	44	44	451	545	-17.2%	578		151	1,029	896	47.8%	76	57	33.3%	1,105	753	46.7%			
11	38	45	444	565	-21.4%	559		149	1,033	714	44.8%	75	62	20.9%	1,108	778	42.7%			
12	101	70	448	557	-20.9%	576		153	1,024	720	42.2%	76	58	31.0%	1,100	778	41.3%			
13	67	78	468	563	-16.8%	585		151	1,053	714	47.4%	76	59	28.8%	1,129	773	48.0%			
14	85	87	448	557	-18.5%	592		150	1,040	707	47.1%	75	59	27.1%	1,115	766	45.5%			
15	72	93	425	535	-20.5%	583		146	1,008	880	48.2%	100	83	58.7%	1,108	743	49.1%			
16	80	64	433	539	-19.8%	588		134	1,021	873	51.7%	76	93	-18.2%	1,097	766	43.2%			
17	47	36	440	522	-16.7%	604		144	1,044	866	56.7%	75	59	27.1%	1,119	725	54.3%			
18	38	38	438	528	-17.0%	612		148	1,050	878	55.3%	75	61	22.9%	1,125	737	52.6%			
19	77	110	455	531	-14.3%	590		153	1,045	884	62.7%	74	81	21.3%	1,119	745	50.2%			
20	65	78	457	543	-15.8%	588		148	1,025	891	48.3%	72	59	22.0%	1,097	750	46.2%			
21	108	89	435	521	-16.5%	591		143	996	864	50.0%	73	59	23.7%	1,069	723	47.8%			
22	67	100	426	517	-17.6%	567		142	993	859	50.8%	102	82	64.5%	1,085	721	51.8%			
23	81	89	428	535	-20.0%	588		141	986	878	45.8%	72	108	-32.0%	1,058	782	36.2%			
24	35	35	442	530	-16.6%	587		145	1,009	875	49.4%	72	88	9.0%	1,081	741	45.8%			
25	44	32	443	524	-16.4%	564		144	1,007	868	50.7%	71	64	10.9%	1,078	732	47.2%			
26	78	81	438	541	-18.0%	578		146	1,018	880	48.1%	69	61	13.1%	1,085	747	46.2%			
27	92	73	441	558	-20.9%	576		140	1,017	868	45.7%	70	59	18.6%	1,087	757	43.5%			
28	80	75	420	555	-24.3%	585		131	1,005	868	48.5%	92	59	55.9%	1,097	745	47.2%			
29	72	108	455	554	-17.8%	561		132	1,016	886	48.1%	83	94	-1.0%	1,109	780	42.1%			
30	77	51	427	547	-21.9%	570		130	997	877	47.2%	72	91	-20.8%	1,109	768	39.1%			
MTD	68.3	69.0	446.3	545.7	-18.2%	583.0		144.4	1,029.8	860.1	49.2%	77.3	68.8	21.5%	1,107.3	753.7	48.8%			
QTD	68.0	65.6	446.9	565.3	-20.9%	550.4		151.4	897.3	716.7	39.1%	75.6	61.1	23.9%	1,073.1	777.8	37.9%			
YTD	60.7	59.5	543.7	594.9	-8.6%	229.4		81.3	851.4	773.0	10.1%	71.7	60.5	18.4%	823.1	833.5	-18.7%			

<sup>1</sup> Totals may include contract beds

3 – Superscript in footnote text

## Exhibit 2

### Arrestee Drug Abuse Monitoring (ADAM) Report Drug Test Results, By Drug By Site Adult Male Arrestees, 2000 through 2003 - Revised Weights

Primary City	Percent of Arrestees Who Tested Positive for:						
	Any NIDA-5 Drug <sup>1</sup>	Marijuana	Cocaine Crack	Opiates Heroin	PCP	Methamphetamine	Multiple NIDA-5 Drugs
Albany, NY	67.3%	49.4%	29.3%	5.3%	0.5%	0.0%	16.6%
Albuquerque, NM	64.1%	39.1%	36.5%	12.4%	0.4%	8.1%	26.4%
Anchorage, AK	57.0%	42.8%	21.6%	4.4%	0.0%	0.8%	11.5%
Atlanta, GA	70.1%	38.2%	48.0%	2.9%	0.0%	1.7%	19.7%
Birmingham, AL	64.4%	43.5%	33.7%	7.9%	0.0%	0.6%	19.3%
Boston, MA	76.2%	44.5%	34.8%	17.8%	0.0%	0.0%	18.0%
Charlotte, NC	63.3%	44.3%	34.3%	2.9%	0.0%	0.4%	17.5%
Chicago, IL	83.0%	49.0%	46.2%	25.7%	2.5%	0.5%	34.7%
Cleveland, OH	70.5%	48.2%	35.9%	4.4%	7.7%	0.5%	23.8%
Dallas, TX	57.9%	36.2%	30.6%	6.0%	3.3%	4.1%	18.6%
Denver, CO	63.1%	40.6%	34.9%	4.7%	0.6%	3.7%	19.4%
Des Moines, IA	58.2%	43.3%	10.3%	2.4%	1.3%	21.3%	19.0%
Detroit, MI	65.9%	47.6%	23.5%	7.7%	0.0%	0.0%	11.6%
Ft. Lauderdale, FL	61.6%	43.6%	30.5%	2.2%	0.0%	0.0%	14.6%
Honolulu, HI	62.0%	31.1%	12.3%	4.6%	0.1%	39.3%	22.2%
Houston, TX	56.3%	35.6%	30.0%	6.5%	3.9%	0.9%	16.6%
Indianapolis, IN	65.0%	47.8%	33.0%	4.4%	1.3%	1.0%	20.8%
Kansas City, MO	69.2%	49.5%	33.4%	0.3%	8.7%	1.0%	22.7%
Laredo, TX	52.1%	26.4%	39.3%	9.8%	0.0%	0.0%	20.2%
Las Vegas, NV	62.0%	34.1%	22.8%	5.4%	2.1%	22.4%	20.8%
Los Angeles, CA	66.4%	39.0%	26.0%	3.0%	1.0%	24.8%	25.3%
Manhattan, NY	75.5%	41.9%	43.8%	16.9%	1.7%	0.2%	25.4%
Miami, FL	62.7%	38.6%	44.9%	3.4%	0.0%	0.1%	23.7%
Minneapolis, MN	68.2%	51.9%	29.0%	4.8%	2.2%	2.8%	20.5%
New Orleans, LA	70.6%	46.0%	40.3%	15.3%	0.1%	1.0%	25.8%
Oklahoma City, OK	70.4%	63.8%	24.1%	3.7%	4.1%	12.1%	24.3%
Omaha, NE	66.1%	47.9%	20.9%	3.2%	0.5%	17.6%	21.5%
Philadelphia, PA	70.5%	44.8%	34.7%	13.0%	8.7%	0.2%	26.1%
Phoenix, AZ	69.9%	38.6%	27.6%	5.5%	1.3%	26.4%	26.9%
Portland, OR	66.7%	36.2%	25.0%	12.8%	0.7%	21.9%	24.8%
Rio Arriba, NM	71.7%	44.4%	35.4%	26.9%	0.0%	1.9%	30.0%
Sacramento, CA	75.1%	49.2%	18.8%	6.2%	1.2%	31.7%	26.4%
Salt Lake City, UT	55.1%	33.0%	17.2%	6.7%	0.0%	20.2%	19.0%
San Antonio, TX	55.6%	39.1%	28.0%	9.2%	0.0%	2.3%	20.0%
San Diego, CA	62.2%	38.3%	12.0%	5.6%	0.8%	29.2%	21.4%
San Jose, CA	58.2%	35.6%	12.8%	3.5%	2.8%	26.3%	21.3%
Seattle, WA	65.9%	36.0%	35.0%	9.4%	2.2%	10.6%	23.0%
Spokane, WA	63.1%	43.0%	16.0%	8.0%	1.0%	23.7%	23.5%
Tampa, FL	59.6%	45.2%	29.7%	3.7%	0.2%	1.5%	19.4%
Tucson, AZ	68.6%	44.6%	40.2%	6.3%	0.6%	8.6%	27.9%
Tulsa, OK	69.0%	51.8%	20.6%	4.8%	2.1%	16.1%	23.2%
Washington, DC	64.2%	37.6%	27.2%	9.6%	10.4%	0.4%	19.0%
Woodbury, IA	40.8%	29.8%	7.3%	0.7%	0.0%	14.4%	10.8%
<b>Median</b>	<b>65.0%</b>	<b>43.0%</b>	<b>29.7%</b>	<b>5.5%</b>	<b>0.7%</b>	<b>2.3%</b>	<b>21.3%</b>

1 – Groups of rows

2 – gap color and size

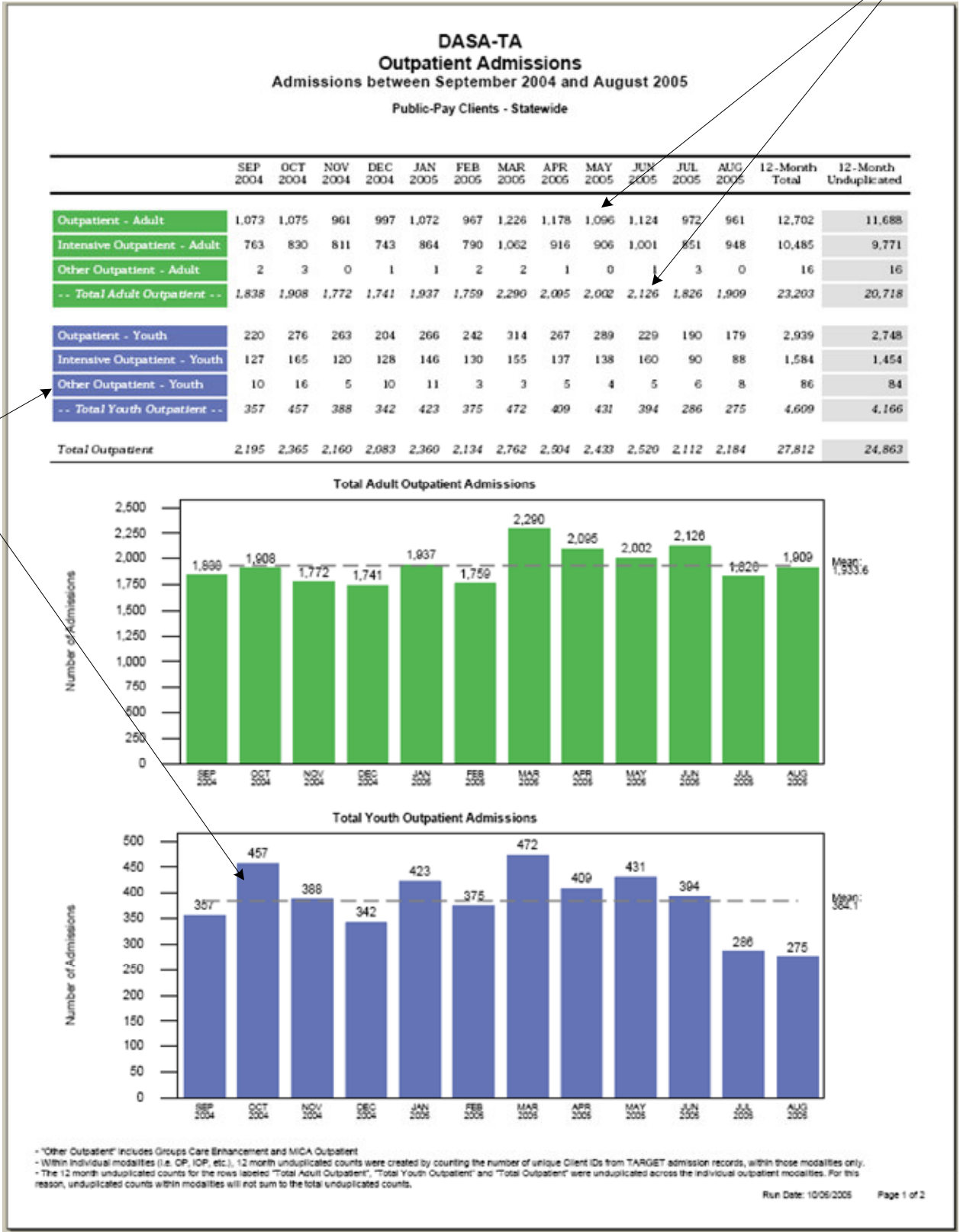
\* Results are suppressed if fewer than 25 arrestees were tested for a particular drug.

<sup>1</sup> The five drugs listed here are referred to as the NIDA-5, established by the National Institute on Drug Abuse as a standard panel of commonly used illegal drugs.

# Exhibit 3

1 – Differential text style

2 – Text background matches graph bars



1 - Style info embedded in data

Exhibit 4

WA State Department of Corrections Contract Violators  
DAJD Detail Billing Report

September 2005

From-To	Days	Reason	Chg Description	Status	RCW	TOW	ORI	Cause	Case	Chg Dt-Chg RelDt
9/8-9/13	6	OAA only	1 COMM. PLACEMENT ARR	PHS	9.94A.195	FS	WA034015G		865718	08/08/05-08/13/05
Total DOC Days for Inmate: 6										
9/1-9/13	13	OAA only	1 COMM. PLACEMENT ARR	PHS	9.94A.195	FS	WA034015G		865732	08/24/05-08/13/05
Total DOC Days for Inmate: 13										
9/28-9/30	3	OAA only	1 COM PLACMT ARR*ASSLT2	PHS	9.94A.195	FS	WA034015G		887187	08/28/05-
Total DOC Days for Inmate: 3										
9/1-9/7	7	OAA only	1 ESCAPE/VUCSA	PHS	9.94A.195	FS	WA034015G		851456	08/24/05-08/08/05
9/8-9/22	15	OAA only	2 COMM. PLACEMENT REVO	SJS	9.94A.270	FS	WACORR000	041123083	851456	08/08/05-08/22/05
Total DOC Days for Inmate: 22										
9/8-9/18	10	OAA only	1 INVEST THEFT	INV	2389	IB	WASPD0000		050377683	09/03/05-09/08/05
9/19-9/22	4	OAA only	2 COMM. PLACEMENT ARR	PHS	9.94A.195	FS	WA034015G		981581	08/07/05-08/19/05
			3 COMM. PLACEMENT REVO	PHR	9.94A.270	FS	WA034015G		981581	08/19/05-08/22/05
Total DOC Days for Inmate: 14										

3 - Page numbers

2 - Embedded style info in LINE statement



## Exhibit 6

### Access I.A. Community Outpatient Penetration Rates - General Population

**A. Operation Definition:** The proportion of people in the general population who received publicly funded Outpatient mental health services in the Fiscal Year by RSN.

**Operational Measure:** This is calculated by dividing the number people who recieved the outpatient mental health services during a Fiscal Year by an estimate of the general population as of April 1st of the calendar year.

**Formulas:**

Number of person receiving the outpatient mental health services during the Fiscal Year by RSN

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Estimate of people in the general population in that Fiscal Year by RSN

**Data Notes:**

2002 and 2003 data excludes crisis hotline calls, 24-hour crisis services , and residential services as specified in the January 2002 Data Dictionary. Reporting of these services varies across the state.

The State total is unduplicated clients across all RSNs (i.e., each person is only counted once in the State).

The RSN count shows the number of unduplicated clients within each of RSN (i.e., one person is counted in each RSN in which they received services.).

Counts are of people, not admissions, episodes, or units of service.

Population are from the Washington State Office of Financial Management (OFM). The calendar year of estimate used is the same as the analysis year. For example, for Fiscal Year 2004, Calendar year 2004 estimates would be used.

OFM releases complete population estimates every alternate year. The intervening years were estimated by assuming a constant rate of change between those years.

# Exhibit 7

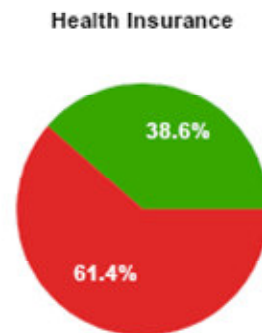
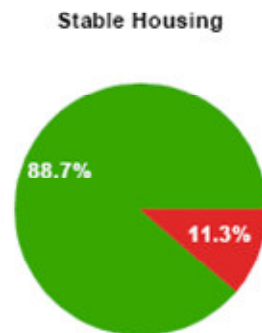
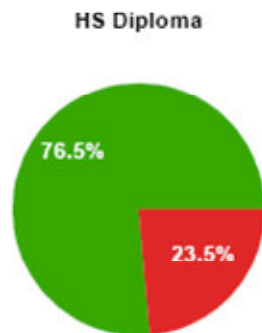
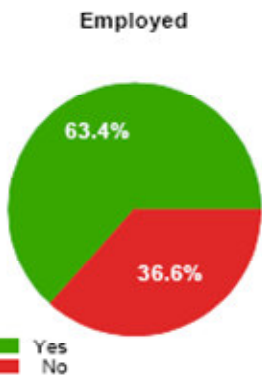
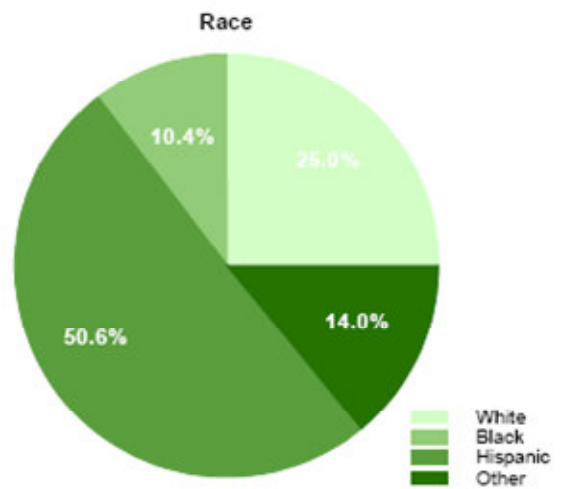
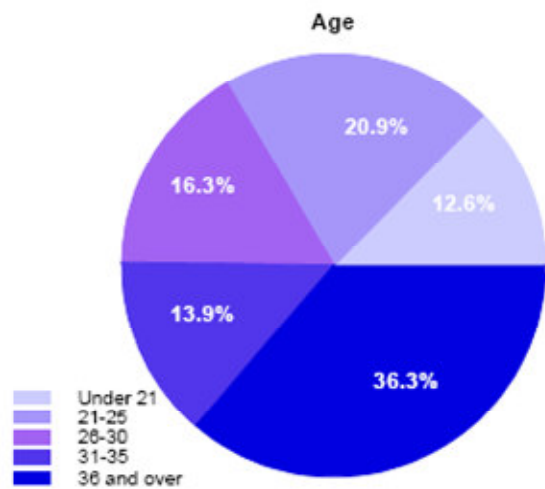
## Arrestee Drug Abuse Monitoring (ADAM) Report Demographic and Sociodemographic Characteristics

ADAM Site: San Jose, CA  
 Interview Year: 2000 through 2003  
 Sample: Adult Male  
 Sample Size (unweighted): 3,164  
 Breakout Category: None  
 Analysis Weights: Revised Weights

Age	
Under 21	12.6%
21-25	20.9%
26-30	16.3%
31-35	13.9%
36 and over	36.3%

Race	
White	25.0%
Black	10.4%
Hispanic	50.6%
Other	14.0%

Other Characteristics	
Unemployed	36.6%
No High School Diploma	23.5%
Unstable Housing	11.3%
No Health Insurance	61.4%



10/05/2005

Exhibit 8

Snohomish County Department of Corrections  
Capacity Variance Report  
September 2005

	Main Jail - Wall St						Main Jail - Oakes St						The Ridge						Work Release						
	Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		
	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	
September	477	477	0	0	477	477	480	480	160	160	640	640	140	140	40	40	180	180	48	48	10	10	58	58	
Daily counts are over/under capacity																									
1	-31	-17	2	72	-29	55	-21	-29	-50	-16	-8	-24	-3	-10	-2	-7	-5	-17	-3	-10	-2	-7	-5	-17	
2	-22	-5	3	70	-19	65	-13	-27	-40	-23	-10	-33	-3	-7	-2	-7	-5	-14	-3	-7	-2	-7	-5	-14	
3	-48	-1	1	68	-47	67	15	-29	-14	-18	-10	-28	-4	-8	1	-6	-3	-14	-4	-8	1	-6	-3	-14	
4	-7	-12	5	73	-2	61	-21	-28	-49	-18	-12	-30	-3	-7	2	-6	-1	-13	-3	-7	2	-6	-1	-13	
5	-8	2	75	8	77	-55	-27	-28	-55	-17	-13	-30	-3	-8	2	-6	-1	-14	-3	-8	2	-6	-1	-14	
6	-4	15	4	77	0	92	-21	-26	47	-22	-14	-36	-4	-10	-2	-6	-6	-16	-4	-10	-2	-6	-6	-16	
7	-25	36	2	80	-23	116	-7	-32	-39	-25	-16	-41	-4	-11	-1	-7	-5	-18	-4	-11	-1	-7	-5	-18	
8	-12	15	3	67	-9	82	-19	-43	-62	-27	-12	-39	-3	-14	0	-7	-3	-21	-3	-14	0	-7	-3	-21	
9	-32	15	2	70	-30	85	-7	-42	-49	-30	-15	-45	-5	-13	2	-7	-3	-20	-5	-13	2	-7	-3	-20	
10	-31	-2	5	70	-26	68	-21	-41	-62	-19	-10	-29	-5	-11	1	-5	-4	-16	-5	-11	1	-5	-4	-16	
11	-38	11	5	77	-33	88	-16	-35	-51	-19	-12	-31	-6	-6	2	-4	-4	-10	-6	-6	2	-4	-4	-10	
12	-31	8	2	82	-29	90	-32	-32	-64	-14	-13	-27	-5	-9	2	-5	-3	-14	-5	-9	2	-5	-3	-14	
13	-12	9	3	77	-9	86	-26	-29	-55	-16	-13	-29	-4	-8	1	-5	-3	-13	-4	-8	1	-5	-3	-13	
14	-30	4	1	76	-29	80	-7	-41	-48	-18	-12	-30	-4	-6	0	-7	-4	-13	-4	-6	0	-7	-4	-13	
15	-52	-9	67	67	-52	58	-16	-41	-57	-24	-11	-35	-5	-5	0	-6	-5	-11	-5	-5	0	-6	-5	-11	
16	-49	-11	5	73	-44	62	-11	-41	-52	-30	-16	-46	-5	-6	0	-5	-5	-11	-5	-6	0	-5	-5	-11	
17	-41	-17	4	62	-37	45	-1	-35	-36	-22	-14	-36	-6	-8	-1	-5	-7	-13	-6	-8	-1	-5	-7	-13	
18	-40	-7	1	58	-39	51	-1	-27	-28	-20	-12	-32	-4	-7	-2	-4	-6	-11	-4	-7	-2	-4	-6	-11	
19	-24	0	2	54	-22	54	-18	-32	-50	-15	-12	-27	-5	-7	-1	-4	-6	-11	-5	-7	-1	-4	-6	-11	
20	-21	10	1	56	-20	66	-37	-35	-72	-18	-14	-32	-5	-9	4	-4	-9	-13	-5	-9	4	-4	-9	-13	
21	-46	-14	4	58	-42	44	-45	-34	-79	-20	-17	-37	-4	-8	-3	-5	-7	-13	-4	-8	-3	-5	-7	-13	
22	-55	-12	4	52	-51	40	-37	-36	-73	-20	-18	-38	-3	-5	-2	-5	-10	-16	-3	-5	-2	-5	-10	-16	
23	-54	-2	5	60	-49	58	-48	-34	-82	-22	-17	-39	-5	-3	-2	-6	-7	-13	-5	-3	-2	-6	-7	-13	
24	-38	-7	3	60	-35	53	-44	-29	-73	-19	-16	-35	-5	-3	-3	-4	-8	-13	-5	-3	-3	-4	-8	-13	
25	-35	-12	1	59	-34	47	-51	-25	-76	-19	-17	-36	-7	-4	-2	-5	-9	-14	-7	-4	-2	-5	-9	-14	
26	-41	0	2	64	-39	64	-34	-28	-62	-19	-16	-35	-7	-6	-3	-5	-10	-16	-7	-6	-3	-5	-10	-16	
27	-41	9	5	72	-36	81	-31	-33	-64	-24	-16	-40	-6	-8	-4	-5	-10	-13	-6	-8	-4	-5	-10	-13	
28	-58	12	1	66	-57	78	-29	-26	-55	-32	-17	-49	-3	-8	-3	-6	-6	-14	-3	-8	-3	-6	-6	-14	
29	-26	2	4	75	-22	77	-44	-35	-79	-31	-17	-48	-3	-11	-3	-5	-6	-16	-3	-11	-3	-5	-6	-16	
30	-52	-2	2	72	-50	70	-35	-35	-70	-31	-19	-50	-4	-12	-2	-5	-6	-17	-4	-12	-2	-5	-6	-17	
MTD	-33	1	3	68	-31	69	-24	-33	-56	-22	-14	-36	-4	-8	-1	-5	-5	-13	-4	-8	-1	-5	-5	-13	

1 Capacity is as of the first day of the month

## Appendix A - ODS Style Attributes

Attribute	Description	HTML	RTF	PDF
ABSTRACT=	Specify whether or not graph styles are used in CSS or LaTeX style files.	x		
ACTIVELINKCOLOR=	Specify the color for links that are active.	x	x	
ASIS=	Specify how to handle leading spaces and line breaks.	x	x	x
BACKGROUND=	Specify the color of the background of the table or graph	x	x	x
BACKGROUNDIMAGE=	Specify an image to use as the background.	x		
BODYSROLLBAR=	Specify whether or not to put a scrollbar in the frame that references the body file.	x		
BODYSIZE=	Specify the width of the frame that displays the body file in the HTML frame file.	x		
BORDERCOLOR	Specify the color of the border if the border is just one color.	x		x
BORDERCOLORDARK	Specify the darker color to use in a border that uses two colors to create a three-dimensional effect.	x		x
BORDERCOLORLIGHT	Specify the lighter color to use in a border that uses two colors to create a three-dimensional effect.	x		x
BORDERWIDTH	Specify the width of the border of the table.	x		x
BOTTOMMARGIN=	Specify the bottom margin for the document.	x	x	x
BULLETS=	Specify the string to use for bullets in the contents file.	x		
CELLHEIGHT=	Specify the height of the cell.	x	x	x
CELLPADDING=	Specify the amount of white space on each of the four sides of the text in a cell.	x	x	x
CELLSPACING=	Specify the thickness of the spacing between cells.	x	x	x
CELLWIDTH=	Specify the width of the cell.	x	x	x
CONTENTPOSITION=	Specify the position of the frames in the frame file that displays the contents and the page files.	x		
CONTENTSCROLLBAR=	Specify whether or not to put a scrollbar in the frames in the frame file that displays the contents and the page files.	x		
CONTENTSIZ=	Specify the width of the frames in the frame file that display the contents and the page files.	x		
CONTRASTCOLOR=	Specify the alternate colors for maps. The alternate colors are applied to the blocks on region areas in block maps.	x	x	x
DROPSHADOW=	Specify whether to use a drop shadow effect for text in a graph.	x	x	x
ENDCOLOR=	Specify the end color for a gradient effect in a graph.	x	x	x
FILLRULEWIDTH=	Cause a rule of the specified width to be placed into the space around the text (or entire cell if there is no text) where white space would otherwise appear.			x
FLYOVER=	Specify the text to show in a tool tip for the cell.	x		x
FONT_FACE=	Specify the font to use.	x	x	x
FONT_SIZE=	Specify the size of the font to use.	x	x	x
FONT_STYLE=	Specify the style of the font.	x	x	x
FONT_WEIGHT=	Specify the font weight.	x	x	x
FONT_WIDTH=	Specify the font width compared to the width of the usual design.	x	x	x
FONT=	Specify a font definition.	x	x	x
FOREGROUND=	Specify the color of text or data items	x	x	x
FRAME=	Specify the type of frame to use on an HTML table.	x	x	x
FRAMEBORDER=	Specify whether or not to put a border around the HTML frame for an HTML file.	x		
FRAMEBORDERWIDTH=	Specify the width of the border around the HTML frames for an HTML file.	x		
FRAMESPACING=	Specify the width of the space between HTML frames for HTML files.	x		
GRADIENT_DIRECTION=	Specify the direction of the gradient effect in either the X or Y axis direction to influence the graph background, legend background, charts, walls, floors, etc.	x	x	x
HREFTARGET=	Specify the window or frame in which to open the target of the link.	x		
HTMLCLASS=	Specify the name of the stylesheet class to use for the table or cell.	x		
HTMLCONTENTTYPE=	Provide the value of the content type for pages that you send directly to a web server rather than to a file.	x		
HTMLDOCTYPE=	Specify the entire doctype declaration for the HTML document, including the opening "<!DOCTYPE" and the closing ">".	x		
HTMLID=	Specify an ID for the table or cell.	x		
HTMLSTYLE=	Specify individual attributes and values for the table or cell.	x		
IMAGE=	Specify the image to appear in the background. This image can be positioned or tiled.	x	x	x
INDENT=	Set a numeric value to use as the indention depth.		x	x
JUST=	Specify justification.	x		x
JUST=	Specify the image's horizontal positioning.	x	x	x
LEFTMARGIN=	Specify the left margin for the document.	x		x

